

# *The Impact of Digital Inclusive Finance Development on the Income Gap between Urban and Rural Areas*

Aonan Zhu<sup>1,a</sup>, Shuo Chen<sup>2,b,\*</sup>, Junyu Lin<sup>2,c</sup>, Xingjuan Zhao<sup>2,d</sup>

<sup>1</sup>*School of Business Administration, Jiangxi University of Finance and Economics, Nanchang, Jiangxi, 330044, China*

<sup>2</sup>*Zhejiang Business Technology Institute, Ningbo, Zhejiang, 315012, China*

<sup>a</sup>1223900886@qq.com, <sup>b</sup>1394919942@qq.com, <sup>c</sup>173943147@qq.com, <sup>d</sup>1766412206@qq.com

\*Corresponding author

**Keywords:** Digital Inclusive Finance, Urban-rural Income Gap, Development Status, Impact Mechanism

**Abstract:** With the integration and innovation of inclusive finance, digital technology, and “Internet+”, digital inclusive finance has steadily evolved into a new paradigm for constructing contemporary socialist power in the new era. Digital inclusive finance helps to alleviate financial poverty in a cost-effective, burden-reducing, and long-term way by improving the rural financial ecosystem and fostering integrated urban and rural growth. This study discusses the effect mechanism of digital inclusive finance on the urban-rural income gap and analyzes the development status of digital inclusive finance and the urban-rural income gap in Jiangxi Province. Based on these findings, this article suggests that the government should strengthen the ecological system of digital inclusive finance, encourage the diversification of digital inclusive finance growth, and establish a multi-party cooperation platform, and further support the balanced development of urban and rural economy in Jiangxi Province.

## 1. Introduction

With economic development entering a time of “structural slowdown” in China, the problem of urban-rural dual economic structure has become increasingly prominent. As a result, the excessive income disparity between urban and rural residents will limit the financial market’s ability to play its role in resource allocation, impede income diversification of residents in poor areas and sustainable economic development, and have an impact on better life needs of residents in rural and other poor areas.

In Jiangxi Province, for example, there is still a significant gap in the development of digital inclusive finance in rural regions, with critical issues such as defective infrastructure, an unsound regulatory framework, and insufficient digital empowerment[1]. Because of the aforementioned conditions, financial resources and money in rural regions are frequently underused. Furthermore, there is a significant gap in the financial services business, and the urban-rural income disparity fails to be handled using financial thresholds and financial disincentives. At the moment, digital inclusive finance is gradually becoming a viable solution to the excessive income disparity between

urban and rural areas. With the benefits of cloud computing and big data technology provided by the Internet and digital technology, it constructs a credit investigation platform, broadens the scope of financial services, eliminates regional space restrictions, lowers the threshold of financial services and transaction costs, and fully utilizes financial resources in rural and poor areas. As a result, residents in low-income areas can also benefit from financial services.

## 2. Theoretical Foundation

### 2.1. The Connotation of Digital Inclusive Finance

The preliminary concept of digital inclusive finance was formally proposed at the G20 Hangzhou Summit in 2016: all actions to promote inclusive finance development through digital financial services. Digital inclusive finance, in particular, is an integrated innovation of inclusive finance, digital technology, and “Internet Plus” that provides financial services and products to vulnerable groups who have been excluded from finance at a manageable cost. In the meantime, it has strong commercial sustainability and effectively realizes integrated development of inclusive finance and benefits[2].

### 2.2. Impact Mechanisms of Digital Inclusive Finance on Urban-rural Income Gap

As shown in Figure 1, digital financial inclusion can restrain the urban-rural income gap mainly from four aspects: lowering the threshold, alleviating exclusion, playing a role in poverty reduction, and promoting economic growth.

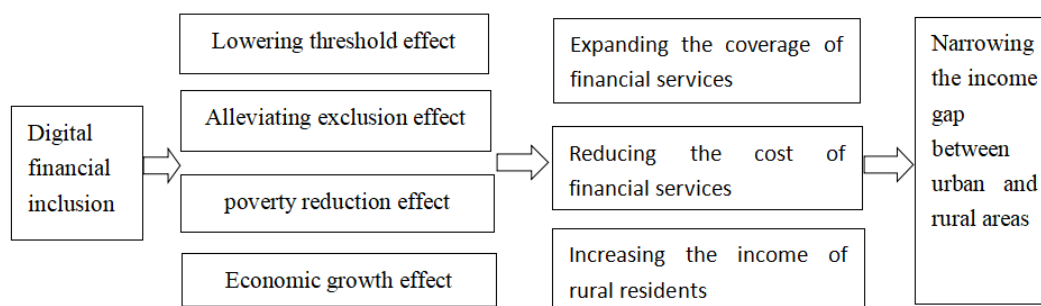


Figure 1: The path of digital financial inclusion affecting the urban-rural income gap.

#### 2.2.1. Lowering Threshold Effect

Traditional financial development has a threshold effect. Financial resources are concentrated and distributed in economic areas with better infrastructure construction in order to obtain greater economic benefits. Residents in poor areas must incur additional economic costs to receive financial benefits, and the channels are not smooth. This is the threshold effect of conventional financial development [3]. Digital inclusive finance combines the benefits of big data and inclusive finance with the Internet platform, effectively lowering the economic cost of financial services and promoting wider and more equitable financial service coverage to low-income groups such as rural residents.

#### 2.2.2. Alleviating Exclusion Effect

Financial branches of some banks are difficult to establish in economically depressed and poor areas in order to reduce the risk of operation and supervision, which results in the absence of

efficient channels for rural residents to access financial resources and services, leading to financial exclusion [4]. Inequalities in financial development between urban and rural areas result from areas with greater economic growth having perfect capital endowments, which draw labor, capital, and other production-related elements to congregate in metropolitan areas. In conclusion, increasing the use of digital inclusive financial services in rural and other underserved areas can improve the local financial system and effectively combat the impacts of financial exclusion[5] .

### **2.2.3. Leveraging Poverty Reduction Effect**

Digital inclusive finance exerts its poverty reduction effect in three main ways [6]. First, digital inclusive finance has the potential to support more micro and small businesses which have trouble getting funding, preserving their regular operations and long-term growth, and bridging the income gap between urban and rural areas. Second, digital inclusive finance makes it easier for rural inhabitants to obtain financial services based on the Internet platform. Rural households can also increase their personal property income by using financial services like wealth management and savings. Finally, by accurately creating a credit system for rural populations using digital technology, financial service providers will be better able to manage risk and enable the fair distribution of more money to those with good credit who live in disadvantaged areas.

### **2.2.4 Promoting Economic Growth Effect**

Meanwhile, encouraging rural economic development can help build financial infrastructure even more effectively, allocate financial resources more wisely in rural areas, improve product innovation capacity of financial institutions, expand financial management and investment options for rural residents, ensure the steady growth of the rural economy, and thus reduce the income gap between different class groups[7]. The income levels of rural residents will rise as a result of the growth of digital inclusive finance, which will give people of underdeveloped areas access to financial development benefits through efficient channels[8].

## **3. Analysis of Status Quo of Digital Inclusive Finance on Urban-rural Income Gap in Jiangxi Province**

### **3.1. Status Quo of Digital Inclusive Finance Development in Jiangxi Province**

In Jiangxi Province, the overall level of development for inclusive digital finance is at the second-highest level nationwide. The government concerned developed a platform for inclusive financial comprehensive service, reform test sites, and science and technology research centers in recent years to support the advancement of digital inclusive financial reform. As depicted in Figure 2, this study makes use of the digital inclusive financial index system created by the Digital Finance Research Center of Peking University (2020) [9] using the analytical hierarchy process and coefficient of variation approach.

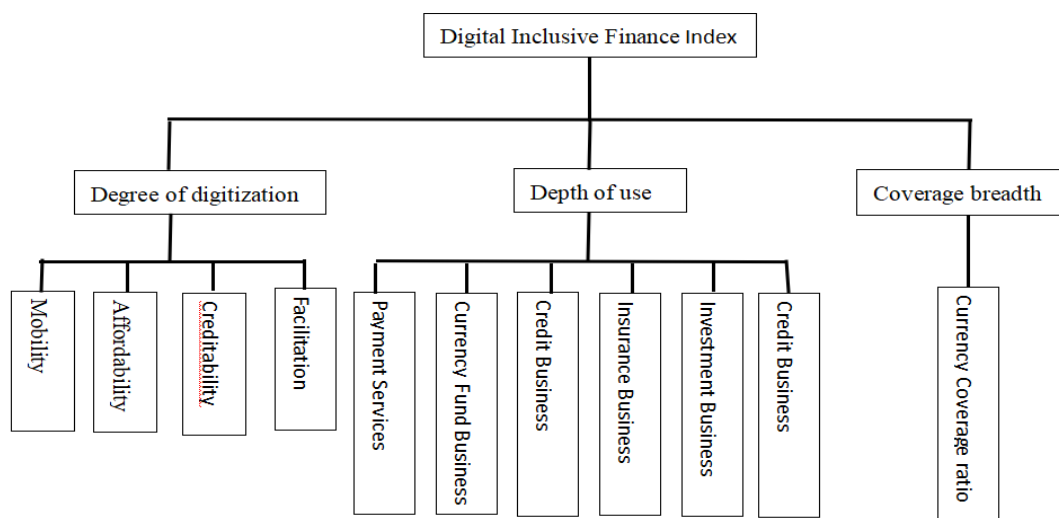


Figure 2: Digital financial inclusion index system.

In terms of the overall index, the impact of COVID-19 have entailed to a slowdown in the development rate of digital financial inclusion in China, but this growth trend is still positive, highlighting the sector’s great resilience and distinctive advantages in the COVID-19 period. Taking Jiangxi Province as an example, the development of digital inclusive finance in Jiangxi Province is in the middle of the national average level, and its development speed is equal to the national average level. Figure 3 depicts the specific development trend.

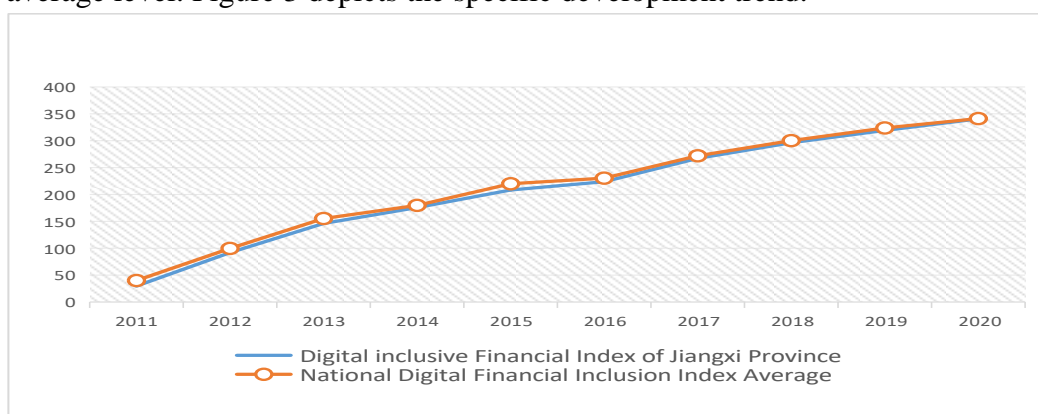


Figure 3: Jiangxi digital inclusive financial index from 2011 to 2020.

The above chart shows that digital inclusive finance of China maintains a good development situation of steady growth year by year, from 40.0042 in 2011 to 341.2194 in 2020, with an average annual growth rate of up to 23.91%. While the overall level of development for digital inclusive finance in Jiangxi Province rises from 29.74 to 340.6109, the average yearly growth rate is comparable to the level of the country as a whole.

### 3.2. Analysis of Urban-rural Income Gap in Jiangxi Province

The proportion of various revenue sources that urban and rural individuals in Jiangxi Province use to make up their disposable income varies somewhat from the standpoint of their actual sources of income. Urban and rural people’s per capita disposable income sources in Jiangxi Province have changed and evolved between 2011 and 2020, as shown in Table 1 and Table 2.

Table 1: Types of disposable income per capita of urban residents in Jiangxi province from 2011 to 2020.

Revenue Sources	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Wage Income	62.47%	63.11%	64.35%	64.27%	63.53%	63.25%	63.45%	63.43%	63.37%	63.05%
Property Income	2.53%	2.49%	4.65%	10.24%	9.78%	9.13%	8.43%	8.72%	8.72%	8.79%
Operating Income	9.23%	9.20%	10.70%	8.07%	7.96%	8.32%	8.35%	8.35%	8.39%	8.01%
Transferable Income	25.77%	25.19%	20.30%	17.42%	18.74%	19.30%	19.77%	19.50%	19.52%	20.14%

Table 2: Types of disposable income per capita of rural residents in Jiangxi province from 2011 to 2020.

Revenue Sources	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Wage Income	43.45%	45.12%	50.36%	38.92%	39.44%	40.83%	42.36%	42.33%	42.03%	42.77%
Property Income	1.62%	1.54%	2.17%	1.52%	1.66%	1.68%	1.62%	1.63%	1.61%	1.64%
Operating Income	49.65%	47.80%	41.95%	40.59%	39.78%	38.66%	36.77%	36.46%	35.76%	34.36%
Transferable Income	5.28%	5.54%	5.52%	18.97%	19.12%	18.83%	19.25%	19.58%	20.60%	21.23%

The findings indicate that salary income will have the most impact on urban inhabitants' per capita disposable income in Jiangxi Province between 2011 and 2020. Even though the amount of wage income for city dwellers rises annually, the overall share barely changes accordingly. Then, the proportion of transfer income received by urban inhabitants declined significantly or even rose negatively between 2011 and 2014, having a considerable negative influence on the income of urban residents. The main sources of disposable income of farmers in Jiangxi Province mainly include wage income and operating income, which account for about 80% of their discretionary income. Additionally, with an average annual growth rate of 14.93% in recent years, transfer income of farmers has increased significantly. And unbalanced economic development pattern has resulted in a significant exodus of young rural labor, a concentration of capital and production factors in urban areas, incomplete infrastructure development in rural areas, and a dearth of financial service providers, which makes it difficult for farmers, small and micro businesses, and individual operators in rural areas to obtain the necessary financial support.

## 4. Conclusions

### 4.1. Improving Infrastructure Construction of Rural Areas of Jiangxi Province and Playing the Role of Financial Resource Allocation

The Internet platform has been used as the carrier for digital inclusive finance. However, Jiangxi Province, as a traditional agricultural province, lacks network equipment, mobile signal base stations and other infrastructure in most rural areas [10]. Therefore, the coverage area of digital inclusive financial service outlets can only be promoted by further enhancing the infrastructure in

rural areas. In addition, government agencies should accelerate the building of wireless networks, signal base stations, and other electronic infrastructure, as well as use welfare policies like “speed and fee reduction” to compel major cell phone providers to lower network usage fees and offer affordable cell phones, in order to lower the barrier to access for rural residents of financial services.

#### **4.2. Deepening Digital Reform of Financial Institutions and Promoting the Transformation and Upgrading of Digital Inclusive Finance**

Financial institutions should fully utilize the benefits of big data, artificial intelligence, the Internet, and other information technologies to design digital financial products and services that are appropriate for the characteristics of different groups, encourage product diversification, enhance service quality, lower the cost of financial services, and create an all-encompassing business management system. Financial institutions should create a comprehensive digital, inclusive financial supply system based on the regional traits of each region at the same time, in order to better serve rural communities and meet their actual needs.

#### **4.3. Promoting Digital Inclusive Financial Publicity and Education to Improve the Financial Literacy of Rural Residents**

The majority of Jiangxi Province is hilly, the rural areas are generally isolated, and the inhabitants of these distant and rural areas have low levels of education and little financial literacy. Therefore, the relevant government departments in Jiangxi Province should increase rural people’s use of financial services through “going to the countryside” and other means of advertising and education. In addition, the local government should increase funding for financial education, work with relevant financial service providers to carry out financial knowledge popularization initiatives tailored to the needs of rural communities, and remind people living in rural areas to increase their awareness of financial fraud prevention.

#### **4.4. Improving the Regulatory System of Digital Inclusive Finance**

Since digital inclusive finance is still in its early stages of development, it is essential to update the corresponding laws and regulations as well as the oversight of this sector. Government, the CBRC, and the People’s Bank of China must work together to create a specific regulator for digital inclusive finance and enhance the complex regulatory framework in order for this industry to grow [11]. As well as protecting the legal rights and interests of financial consumers, preventing financial fraud cases, and fostering the healthy growth of inclusive digital finance, the appropriate departments must pass explicit legislation in these areas.

#### **Acknowledgements**

Zhejiang Business Technology Institute, 2022 Student Science and Technology Innovation Program Project Grant.

#### **References**

- [1] Liu Huichin, Ziyi Wang, Zhou Shanxu. *The realistic dilemma of digital inclusive finance to help low-income groups and ideas to solve the problem--Ganzhou City as an example*[J]. *Financial Literature*,2022,(01):32-36.
- [2] Dong Yufeng, Zhao Xiaoming. *Responsible digital inclusive finance: Origin, connotation and construction*[J]. *Nanfang Finance*,2018,(01):50-56.

- [3] Zhang Jianbo. *A study on the threshold effect of the impact of inclusive finance on urban-rural income gap*[J]. *Gansu Social Science*,2018(01):146-152.
- [4] Hu Guohui, *Financial exclusion and the construction of inclusive financial system* [M]. *China Finance Press*, 2015
- [5] Ye Nunjun. *Study on the Risk Defects of Digital Inclusive Financial Ecosystem* [J]. *Modern Trade Industry*,2021,42(11):106-107.
- [6] Shi L. *Research on the impact of digital inclusive finance development on urban-rural income gap in Anhui Province*[D]. *Guizhou University of Finance and Economics*,2021.
- [7] Chen D, Yao M. *An empirical analysis of the impact of digital inclusive finance on the income of rural residents*[J]. *Shanghai Finance*,2019,(06):74-77.
- [8] Chen M, Chen F, Liao S-W. *Digital inclusive finance and rural economic growth: spatial spillover mechanisms and empirical evidence*[J]. *Journal of Capital University of Economics and Business*, 2022,24(06):14-27.
- [9] Guo F, Wang JY, Wang F, Kong T, Zhang XUN, Cheng ZY. *Measuring the development of digital inclusive finance in China: indexing and spatial characteristics*[J]. *Economics (Quarterly)*, 2020,19(04):1401-1418.
- [10] Zhao Rui. *Research on the impact of digital inclusive finance on urban-rural income gap*[D]. *Chongqing Normal University*, 2020.
- [11] Jin Wenhui. *Principles and framework for the design of Internet financial regulatory organization*[J]. *Jurisprudence*, 2017,(04):39-50.